

AMENDMENTS TO THE CLAIMS

1. (currently amended) A washing method using a washing apparatus comprising an outer casing in which a cleaning liquid is contained and a cylindrical basket-like washing tub of which a central rotating shaft is disposed in a horizontal direction in said outer casing, and wherein said cylindrical basket-like washing tub has plural protruding portions extending at an inner surface along its axial direction and protruding from said inner surface of said cylindrical basket-like washing tub towards the center of said cylindrical basket-like washing tub, said method comprising:

~~disposing, in an outer casing filled with a cleaning liquid and tightly sealed, a cylindrical basket-like washing tub of which a central shaft is disposed in a horizontal direction; placing a laundry article in the cylindrical basket-like washing tub; and rotating the cylindrical basket-like washing tub about the central shaft in such a manner that the laundry article maintains a near zero gravity state and is spread out so as to be increased in contact area with the cleaning liquid in the~~
a step of placing a laundry article to be washed in said cylindrical basket-like washing tub and filling said cylindrical basket-like washing tub with said cleaning liquid; and a step of rotating said cylindrical basket-like washing tub in order to wash said laundry article in such manner that buoyancy exerting from said inner surface of said cylindrical basket-like washing tub toward the center of said cylindrical basket-like washing tub is generated by said protruding portions accompanied by rotation of said cylindrical basket-like washing tub, thereby forcing said laundry article in said cylindrical basket-like washing tub to expand in said cleaning liquid while keeping said laundry article out of contact with said inner surface of said cylindrical basket-like washing tub.

2. (currently amended) The washing method according to claim 1, wherein said protruding portion has a wavy patterned surface is formed on an inner periphery of the cylindrical basket-like washing tub cross section along a circumferential direction ~~for causing the cleaning liquid to flow toward a center of the~~ of said cylindrical basket-like washing tub when the cylindrical basket-like washing tub is rotated; ~~the cylindrical basket-like washing tub has an inner diameter~~

~~of less than 500 mm and is rotated for 60 to 120 times per minute; and the wavy patterned surface is in the form of a sine curve having protrusions protruding in a radial direction of the cylindrical basket-like washing tub.~~

3. (canceled)

4. (currently amended) The washing method according to ~~claim 3~~ claim 1, wherein, in said step of rotating said washing tub in order to wash said laundry article, the said cylindrical basket-like washing tub is rotated normally and reversely with regularity for washing when the cylindrical basket-like washing tub is rotated for 10 or more times per minute.

5. (currently amended) The washing method according to ~~claim 2~~ claim 1, wherein ~~the wavy patterned surface is formed of protruding parts disposed~~ said protruding portions are provided on the said inner periphery surface of the cylindrical basket-like washing tub parallelly to one another at a constant interval along the circumferential direction; each of the protruding parts extending in a longitudinal direction of the cylindrical basket-like washing tub; and a height of each of the protruding parts is set to from 3.0% to 6.0% of the inner diameter D of the cylindrical basket-like washing tub.

6. (canceled)

7. (canceled)

8. (currently amended) The washing method according to claim 1, wherein, in said step of rotating said washing tub in order to wash said laundry article, the said cylindrical basket-like washing tub is rotated intermittently.

9. (currently amended) The washing method according to claim 1, wherein, in said step for rotating said washing tub in order to wash said laundry article, the said cleaning liquid in the said cylindrical basket-like washing tub is controlled so as to be increased or decreased in pressure by a pressure change device.

10. (new) A washing apparatus comprising:
 - an outer casing in which a cleaning liquid is contained;
 - a cylindrical basket-like washing tub of which a central rotating shaft is disposed in its horizontal direction in said outer casing; and
 - plurality of protruding portions extending at an inner surface along its axial direction and protruding from said inner surface of said cylindrical basket-like washing tub towards the center of said cylindrical basket-like washing tub;wherein washing is performed in such manner that buoyancy exerting from said inner surface of said cylindrical basket-like washing tub toward the center of said cylindrical basket-like washing tub is generated by said protruding portions accompanied by rotation of said cylindrical basket-like washing tub, thereby forcing said laundry article to expand in said cleaning liquid while keeping said laundry article out of contact with said inner surface of said cylindrical basket-like washing tub.
11. (new) The washing apparatus according to claim 10, wherein said protruding portion has a wavy patterned cross section along a circumferential direction of said cylindrical basket-like washing tub.
12. (new) The washing apparatus according to claim 10, wherein said washing tub is rotated normally and reversely with regularity for performing washing.
13. (new) The washing apparatus according to claim 10, wherein said protruding portions are provided on the inner surface of said cylindrical basket-like washing tub at a constant interval along the circumferential direction of said cylindrical basket-like washing tub.
14. (new) The washing apparatus according to claim 1, wherein said washing tub is rotated intermittently for performing washing.
15. (new) The washing apparatus according to claim 1, wherein said cleaning liquid filled in said washing tub is controlled so as to be increased or decreased in pressure by a pressure change device for performing washing.